

# AVIATION

*The Oldest American Aeronautical Magazine*

MARCH 28, 1927

Issued Weekly

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Varney mail plane crossing Nellie's Gap, Wasatch Mountains, Salt Lake City

*International News Photo*

VOLUME  
XXII

## SPECIAL FEATURES

NUMBER  
13

THE METEORE SEAPLANE  
SCINTILLA AIRCRAFT MAGNETOS  
LARGE AIRSHIPS AS AIRCRAFT CARRIERS

GARDNER PUBLISHING CO., INC.  
HIGHLAND, N. Y.  
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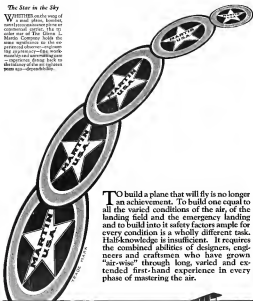
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# WRIGHT

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Vol. XXII

MARCH 28, 1927

No. 13

### The Aircraft Display

THE PROPOSAL to hold an exhibition of American aircraft in Washington, D. C. coincident with the forthcoming Pan-American Congress is one which should offer a wide appeal. The scope of an industry, if it is confined to domestic business, is one thing but if it is broadened to the advantage of a wide foreign trade it is something entirely different. The American automobile industry has long enjoyed a fairly extensive foreign trade, and, with its very wide domestic business, has thrived. Yet, in the case of the aircraft industry, this has not been the case and foreign trade has been very limited. Combined with the fact that, recently, almost recent years, aircraft sales outside the Government were somewhat rare, the lack of foreign trade has left the industry with a very limited outlet for its products.

This almost complete lack of foreign business relations has, no doubt, been very largely due to the long distances which separate this country from Europe where aircraft are in demand. That we have not developed a wider trade in the Latin American is, however, an entirely different problem in which the lack of an extensive demand has been paramount. This condition will not last long, in fact, South American countries are already showing considerable interest in both commercial aviation and military air power. European countries, to a suitable extent, however, have today serious cognizance of the growing aeronautical interest in South America and have taken the initial steps toward developing an appreciable trade in these countries. Nevertheless, South America is obviously a field for the American industry. American firms are closer and, therefore, give better service to South American purchasers, whether Governments, corporations or individuals. Furthermore, owing again to the fact that the two continents are so comparatively close, it is reasonable to expect that American manufacturers can give a very much closer attention to the requirements and necessities of the numerous flying problems peculiar to South America. And, last, but by no means least, the American aircraft industry can, in time cases out of ten, create a lower price on products equally as good and invariably better than any foreign manufacturers.

The occasion of the Pan-American Congress is therefore, a most fitting opportunity for the Aircraft Industry to exhibit itself. Officials of South American Governments will be in Washington at the time, together with representatives of industry and commerce in the South, and there is reason to expect that these representatives would welcome an opportunity of viewing American aircraft on exhibition and in the air, as will be possible at Bolling Field during the period for the Display.

### High and Low Price Planes

EDUCATION of the buying public is to a very large extent a matter of advertising and of time. The automobile firms of today have not established their reputation overnight, but have consistently turned out good products over a number of years, and have built up reputations for certain characteristics. Naturally, there is often little difference between the automobile in the \$2,000 class and that in the \$4,000 class, but years of experience have taught the buying public that the difference in cost represents a real difference in value.

In the aeronautical field the same applies, with the one very great difference, that the buying public has not as yet thoroughly learned to discriminate between classes of aircraft. To the totally uninitiated, all airplanes look alike, and even many so-called aeronautical experts fail to realize that where two airplanes differ materially in price there is probably also a difference in quality and the higher class product will prove worthwhile provided that the purchaser can pay the difference.

Some day, when the business is older, certain firms will hold the position which the high-priced car manufacturers hold in the automobile field, while other firms which have specialized in production in large quantities will be in a class similar to that of the lower priced car manufacturers. To the discriminating, these distinctions already exist in a limited extent in the aviation field, but it will be some time before all of the manufacturers now in the field have established their respective positions. Of course, all classes are equally important and will always have their market, those who can afford the refinements of the more expensive products having those, while the great majority of us will travel around in the less expensive vehicle.

### Air Travel in Japan

THE DETAILS which are published in this issue of AVIATION, regarding air transport activities in Japan are of particular interest because of the peculiar position inherent in the geography of the islands of Nippon. While Japan is not very large, just as the British Isles are not large, it seems reasonable to suppose that the future of regular air transport in the former country is very much brighter than that in Great Britain where the excellence of the railroad facilities and the short distances offer serious competition to air travel.

In Japan, however, regardless of how good the railroad facilities may be and how short may be the distances, the geography of the land—its shape when viewed on a map—so much that the very direct routes possible by airline must present admirable advantages to the development of this latest form of travel.

## All-American Aircraft Display Planned

*Air Show to be held in Washington, D. C., May 2-5, on Occasion of Pan-American Conference*

WITH THIS meeting of the Pan-American Commercial Conference and the Annual Convention of the U. S. Chamber of Commerce, at Washington in May, or, at least, opportunity is given to dramatize to an extremely broad audience, the efficiency and safety, as well as the military and commercial value, of modern American aircraft and equipment. Approximately two thousand manufacturers, in response to the official announcements of a proposed aircraft show, issued by the Department of Commerce and the American Chamber of Commerce of America, have already indicated a desire to make their product and participate in such an event.

An announced last week, a meeting was held under the auspices of the Department of Commerce at Washington, on March 3, largely attended by representatives of the Government Services, the industry and the other co-sponsoring organizations. At this meeting the American Chamber of Commerce was requested, by resolution, to lead the exhibition in the preparation of a program, and to place an exhibition space at the Smithsonian base and in a manner commensurate with the opportunity offered, on behalf of the manufacturers of our native Aircraft Industry.

In accordance with the above, C. O. Peterson has been requested to act as Managing Director and his work has been assigned and a plan developed in follow.

### Commander de Pinedo Crosses Brazil

Comde. Pinedo de Pinedo arrived at São Paulo de Caruaru, Brazil, from Antonina, Paraguay, March 24, making the first flight ever successfully completed to both cities in Brazil. In his 625 mile flight up the Parana River, Commander de Pinedo passed over the towns of Coimbra and Coimbra.

The Italian pilot left Antonina at 08:15 a.m. and flew northward across the Brazilian jungle. He passed over the remote headwaters of the Amazon River, in which there are no means of communication with the outside world, except through the one narrow Indian trail, which is used by the few Indian communities with the little Indian region were Indian and the first man of his lineage was named by Pinedo.

March 27, Commander de Pinedo left São Paulo de Caruaru and disappeared in the great stretches of jungle that make up this region. No word had been received from him at the time of this writing, but it was thought this was due to the fact that communication is practically impossible because of a lack of means existing in these parts to get in touch with the world.

As we go to press, word comes that Commander de Pinedo arrived in Para, Brazil, on March 28, after the first flight ever made across Central Brazil. For two days, the whereabouts of the Commander and his two companions had been unknown. But the team that he had been lost in the tropical jungles of Western Brazil was discovered when the Santa Maria, his service airplane, landed at Manaus at 3 p.m., March 18. From Manaus, Commander de Pinedo flew down the Amazon River, a distance of 600 miles, on March 28, to Para.

### Unique Gliding Performance

A glider named *Reynolds* recently performed an interesting gliding experiment in Great Britain. It was a standard glider, with a long chord, a power driven airplane and was towed into the air. When he had reached several thousand feet altitude, he cut loose and glided back safely to his starting place. He made no take part in gliding except this manner, using this method.

1. To hold a show of both flying and still exhibits of aircraft and equipment at Bolling Field or Annapolis, May 2-5, 1937, inclusive, in January made available through the courtesy of the Army and Navy.

2. No charge will be made for space to the exhibitors and no charge will be made to the public for admission to the show.

3. To release and promote the value of the display, a illustrated catalog will be issued, printed in English, Spanish and Portuguese. In this catalog a description of the various exhibits will be provided. Each description will be limited to statements of the outstanding characteristics and accomplishments of the various products, accompanied by brief specifications and appropriate illustrations, giving concise information set out in the nature of display advertisement. While it will be required of exhibitors to take at least one page in the catalog, other members of the industry, not failing at profitable or convenient to participate in the exhibition, may participate in the catalog.

4. The necessary direct expense of the show will be met from money derived from the catalog. From a preliminary estimate it is believed that, with a price of \$150 per page and \$150 for each additional page, sufficient revenue will be realized to cover the necessary direct expense unless the requirements exceed present estimates.

### Portuguese Flier Crosses South Atlantic

The Portuguese record-holding flier, commanded by Major Serrano Brand, crossed the South Atlantic, on March 24, 1937, at 10:15 a.m., leaving from Lisbon for the Atlantic Ocean, Portuguese Guinea, on the African coast.

Major Serrano Brand's flight across the Atlantic is a stage in his record-holding flight across the Atlantic in complete in safety days.

Major Serrano Brand reported that there was no difficulty in flying directly to the island, although the plane had to fight two days before and after landing was short of gasoline. The Portuguese flier crossed a highly dangerous route than that taken by Comde. Pinedo de Pinedo, the Italian pilot, in two week crossing of the Atlantic. Commander de Pinedo flew from the Cape Verde Islands.

### Time Limit Extended for Civil Licenses

It is announced by the Aeronautics Branch of the Department of Commerce that the time limit for the issuance of applications and identification marks for pilots licenses, under the act November regulations, has been extended from March 1, 1937, until May 1, 1937.

Section 28 of the regulations, which took effect at midnight Dec. 31, 1936, originally called for the filing of all applications by March 1, but it has been decided to extend the date because more of the pilots, mechanics and operators affected by the regulations had not completed the requirements of the law. No data there has been a loss of application covering current and current, but an account of the short time remaining before the date first named, it was decided to give a reasonable extension.

After May 1, 1937, any pilot, operator, or mechanic, who has not applied for the necessary license or identification mark, or both, will be subject to a penalty of \$500. The department is seriously considering imposing such a penalty upon those who, at this time, have apparently made no effort to comply with the regulations.



## Large Airships as Aircraft Carriers

*British Experiments with Airplanes Landing and Hooking on to Airships in Flight Show Future*

By R. A. deH. Hing, A. F. C.  
Squadron Leader, R.A.F. (retired)  
(Copyright, 1937, R. A. deH. Hing)

WHEN CONSIDERING the mass of attempts for various purposes the question arises as to whether it is advisable to leave for goods, or personnel, when in full flight, from being in an airship, and a second that there was always the possibility that an airplane belonging to the ship or capable of being landed on the ship would be an advantage. It is proposed that the rigid airship R-33, which was of various construction, was about to be commissioned to carry out some other experimental work, as that the Staff at the Royal Aircraft Establishment at Farnborough, England, in October, 1936, was asked to look into the question of airships carrying planes and landing them in flight.

After some considerable discussion and careful consideration on the question of weight, etc. it was found that, while the airship would carry heavy loads, it was doubtful whether the structure would stand

Squadron Leader R. A. deH. Hing, then an officer in the British Royal Air Force, in 1925 carried out some highly significant experiments in the possibilities of large airships carrying airplanes which could be released in flight and could again make contact while in the air. The Air Ministry chose Squadron Leader Hing for this work because of his earlier ability as a pursuit plane pilot in close formation flying, which demands the high precision of piloting necessary for the successful conclusion of the experiments he so interestingly describes hereafter. The possibilities, both military and commercial, stressed in these experiments will be fully appreciated by readers of AVIATION.

the airship which might occur in releasing a full-size airplane for which the airship was not designed. However, a 101.5 ft. of the type of the rigid airship, which was built at the early light airplane companies of Lysander was available, and as it weighed but 600 lb., all up, the chance seemed quite suitable for the experimental work.

We entered all available data with regard to achieving a machine to an airship and maintaining contact between the two aircraft, which had been carried out during the War in England, and later in the United States. From this data it became evident that very little was known of the airship in the vicinity of a large airship in flight, and that an experiment of this sort, to be really satisfactory, would mean providing a single book on the airship, under the control of the pilot, for looking up a considerable distance before the airship. Furthermore, some better ac-



movement was necessary to prevent the plane damaging either itself or the airship when actually attached, and some action had to be adopted for checking the sway of the airship when hooked at its tip.

It was felt that, for the first tests, the results of the United States experiments in which a Sperry Messenger was attached to a small airship, could not be made use of, since, in addition to the enormous difference in relative size between the American airship and the plane and the H-35 and lightplanes, no attempt to attach close up under the airship had been made. Also, the novelty of lowering the airplane close to the hull made the still tresses provided on the American airship impracticable.

#### Preliminary Experiments

Some experiments were, therefore, carried out with a small model and a wire structure in a wind tunnel, and a preliminary report was submitted. It was found that the apparatus, which consisted of a horizontal truss bar capable of being driven up by means of a suitable wind, should be hung by two approximately vertical cables attached to strong points on the airship. The fore and aft portion of the truss was fixed by two guys attached to the ends of the truss bar and carried forward to the bow of the airship and at a comparatively small angle to the keel. These guys, while taking the drag of the airplane when attached to the truss, were further cross braced from the corner of the truss to the attachment of the other guy to the airship in order to prevent swaying.

The H-35 proved, so far as the engine was concerned, rather unreliable when combined with all the extra weight of the gear. The engine, a Blackburn Tumbler, gave no satisfactory results, but some good results were experienced owing to the conditions under which it was working for these tests. Another bad point on the airplane was that, in order to use the hook, which was 22½ inch above three feet above the wing, and over the C.G. of the machine, the pilot had to bend his head back and look up, and, consequently, his very little idea as to the position of the horizon, as his vision was limited to either the underside of the airship or the sky.

During the course of the preliminary discussion it was decided that the method of erecting the airship and flying into the truss was not a good one. This had been given into fairly violent experiments when consideration had been established between aircraft, and had also been demonstrated by the airship people when moving to a mast, and it was



Sperry shows this photograph after the first attempt to hook on to the airship in flight.

felt that the current method was to arrange the light path of the eyepiece to be about 60° down above the horizontal in order to let the truss with a certain amount of relative forward speed, together with a certain amount of relative vertical velocity. A guard, however, was provided to prevent the propeller hitting the wires, which guard, however, afterwards proved quite ineffective.

The actual hooking on the airship consisted of hooking the airplane up by means of the vertical cables on the truss at 2½ or 3 ft. of the bottom of the airship, where guys were provided when hooked on the tops of the wings and fuselage to prevent swaying. Of course, as later design the airplane might be hooked right inside the airship.



The DH-35 "thrust" came up being the end of the road on the day R.A. Macgregor was in the control position. The reason was that the airship was unable to move the airship up the airship. The airship was unable to move the airship up the airship. The airship was unable to move the airship up the airship.

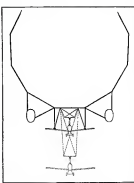


Diagram illustrating the method of attaching the airplane to the light truss and showing forward and vertical position of the truss.

All this investigation and design took some months, but eventually everything was put together and the airship H-35 with the little airplane hooked up in place in front of the two way cars was made ready at Pullman Airship Station. Numerous attempts, together with the press and photographers collected at this station and waited for good weather.

After some days of waiting the weather prophets forecast a few good hours and the airship was taken out of the hangar

under the command of Major (now) of Iraq-Alan Shaw, and on second move. At about 4,000 ft. altitude I got down into the cockpit of the DH-35, a very windy and cold procedure, as there was absolutely no protection, and one had to climb down a very heavy aluminum ladder from the bottom of the airship. I afterwards discovered this and used the truss, so the ladder always had to become a workman when it was.

To make the job easier it had been arranged to stop the two forward engines on the airship, thus eliminating their slipstream over the airplane, and also to slow the airship down below its stalling speed of the DH-35 in order to allow it to drag clear. At a prearranged signal I released the hook from the truss and the airplane dropped away. By means of a wire before I was able to release the compressor, and the propeller was soon turning round happily and I was, thus, able to start the engine.

#### A Broken Propeller

By this time I was some 300 ft. below the airship and a long way behind. I found I had great difficulty in catching up with the airship but eventually this was managed and I was in the correct position to hook on. The truss had been lowered some 25 ft. below the airship and I went to take my place below; this, owing to the low speed of the DH-35, took quite a time. At this point the airship commander decided that we were getting too far from the airship and decided to slow down, and withdraw the signals for me to hook on. Unfortunately, from underneath the airship I was only able to see the truss, and, therefore, did not see this alteration in signals as I moved on. Eventually, however, I managed to hook on, but I was going rather fast, and, owing to the weight of the truss, the airplane was swung around 90° and so on, and the propeller fouled one of the cone-brake wires, broke the wire and the propeller, and stopped the engine. After the wire had slackened I could repair hanging on the truss with a few more luck and a dead engine.

As it was possible that I might see the engine when being hooked up, and the fact of this hanging wire might result in a severe swaying, I decided to release and slide down to the airship. This proved successful and I managed to land at the foot of the mast. I was at once surrounded by numerous press people who took photographs of the damaged machine and a rather noisy job.



The DH-35 (Blackburn Tumbler) with the hook-up gear for attachment to the airship. Note the propeller guard.



The manufacturing activities of the Solafield, Maguire Co., Inc., are under the direction of Herman Hesse, who is vice-president. George Strasser is secretary and treasurer and Thomas E. Pogue is vice-president in charge of sales. Other members of the corporation are Walter J. Spangler, chief engineer, Albert Kight, production manager and Chester P. DeWitt, purchasing agent. Mr. Hesse and Mr. Kight were both members of the original Swiss organization that started the manufacture of Solafield magneto in Bolzano, Switzerland. Mr. Pogue has, up to the present time, personally taken care of all service requirements. His duties are time equally between the factory and the plants of repair manufacturers. Several air stations and Army fields.

The real story of the Solafield magneto may be summarized by the statement that it is based on an entirely new principle of design and construction. Its permanent magnet, the most robust part of the magneto, rotates. The definite points, such as the contact breaker, with its contact points and the armature, are stationary. The principal characteristic of the Solafield magneto lies, therefore, in the complete inversion of the usual system of magneto operation.

### Court Decides Flying Is Safe

A judge's order of damages has been rendered in Los Angeles by Superior Judge William S. Board. The decision declared that flying in airplanes is a safe mode of travel and came to the result of a fight in an International Aircraft Corporation plane.

The decision grew out of the action of a Hollywood moving picture star, Helene Millard, who, enlisted as an International Aircraft Corp. pilot to take her to the cockpit of her father who was ill in San Francisco. The management, under which she appeared, claimed that aviation was unsafe and that if Miss Millard should be injured or killed it would ruin the show in which she was performing. They therefore applied to Superior Judge William S. Board for a restraining injunction. Miss Millard from making the flight and the International Aircraft Corp. from taking her to and from San Francisco. Through its attorney, the International asked against the issuance of the injunction and requested that the judge take a flight in one of its planes before rendering his decision.

A three-man take and judge, referee, clerk, attorney and witnesses advanced to the Turlock Airfield, where the judge flew in a C-12 Eagle.

The plane in which the judge flew was piloted by H. A. Spoor, vice-president and sales manager of the International Aircraft Corp. After landing, the judge, who had been riding in the cockpit beside the pilot, reached his decision, in which he said that he had seen the plane fly well and considered it so safe that he would not wear an parachute, providing that Miss Millard made the trip to San Francisco in the same plane that he had made, with Mr. Spoor as pilot. When next adjourned, Miss Millard immediately left for San Francisco.

### Alexander Builds Eaglerock Models

The Alexander Aircraft Co., of Denver, Colo., is planning theory to send throughout the country a quantity of models of its airplanes, the Eaglerocks. These models will be constructed as closely as possible to conform with the Eaglerock and will include an aluminum body, covered wings, a small Hamilton propeller and an accurate replica of the landing gear. The models are to be very carefully designed and constructed.

M. J. McManey, assistant sales manager for the Alexander Aircraft Co., and Willis E. Kruger, pilot, are at present on an extensive demonstration tour to the South United States. A number of new dealers have purchased demonstration Eaglerocks and have flown away recently from Alexander Airport for their respective territories. Among these are John B. Barry, the new agent for Western Washington and Western Oregon, who was accompanied by H. W. Coffin, who is set to act as his chief pilot. Thomas Thompson, a new firm from Salt Lake City, piloted the new Eaglerock, purchased by the Rocky Mountain Flying Service, back to its territory.

The Rocky Mountain Flying Service has been assigned authority selling rights in the states of Utah, Nevada and Southern Idaho. H. A. Grant, of Salt Lake City, is president of the latter organization.

Walter Halley, president of the Rapid Airlines, Inc., with Bert Gallagher, vice-president and general manager, and Charles Lee, chief pilot, for that company's plane to its new territory in South and North Dakota.

### A Parachute to Stop Above the Ground

It is reported that a Swiss engineer named Kerner has invented a parachute which works by means of the air currents which in this office the parachute is launched, a substantially collapse within a few feet of the ground.

## European Air Transportation

The Personal Representative of Secretary Hoover  
Reports on Development of Civil Aviation in Europe

**I**N THE summer of 1936, Col. Henry B. Landberg, first National Commander of the American Legion, made a trip over the main airways of Europe as the personal representative of Secretary Hoover of the Department of Commerce. His first legs were made with the Publisher of *American*, from Paris to Copenhagen, Stockholm to Berlin and Berlin to London. His views of European aviation are so thoroughly in accord with the observations made from time to time in *American*, that part of the article by Col. Landberg which appeared in the *American Legion Weekly* for March are reprinted.—A. B.

My flying during post-war days had been primarily for the pleasure of making a challenge, a challenge I regarded as just enough harder to place it in the category of a sporting event. My present impending flight was strictly business. I

was, and bearing lightly, need up through the sky. After three hours of flight our landing wheels were lowered, the craft and I stopped to the ground to stretch my legs on the air of Cologne as the Rhine, some hundred and fifty miles from Paris on the Seine.

Under most propitious circumstances began a most enjoyable tour of Europe, a journey of two months that covered over eight thousand miles through the air, moving from over the great mountains of England to the hazy mountains of Constantinople, from my Paris to Philadelphia. From a grandstand seat in a main-controlled motor I viewed the varied landscapes of the nations of old Europe and the new ones born from the ruins of the world of yesterday. In my air safari I found swiftly, back above the channel that linked Napoleon's dream of English conquest, and in Italy



The Guide of the River Tiber, Constantinople, viewed from the air. The Tiber flows from the sea between the two capital cities.

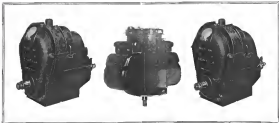
was hastening to reach a vehicle of commerce scheduled to leave its terminal at an appointed hour to travel an scheduled route to the capital in Denmark, Copenhagen, as I had and fifty miles distant. I had every intention that I would enjoy my dinner at that destination long before the wing man's shadowed returned their partners that day.

When before I was encountered with 30-ft flying legs, below and above, the morning I anticipated the great Jackson three-engine monoplane seemed as I would have been and I was boarding the Twentieth Century Limited at Chicago. And when seven years previously I had crashed my not immediately known as a narrow cockpit covered with a molasses-gum resin, this morning I stretched my legs comfortably from the luxury of a well-appointed seat in a cultured compartment quite the equal in accommodations of a Pullman coaches at the beach.

Yellow travelers entered, our baggage was stowed away with a minimum of trouble, engine was warmed and started and a few minutes later we whirled along the run-

ways time I passed down to within the low-lying Alpine peaks (over which Hesse's vibrant soldier band struggled for weeks to make an escape of human endeavor) first through one ridge and then like the Jackson of nightfall.

I hope I will not be thought inconsistent in describing my aerial peregrinations as unusual. I merely emphasize the term because, in measuring whether's progress from seven years past, it is not only possible but highly probable that seven years hence the usual mode of "young Europe" way will be from the air. Last I be regarded as an unduly optimistic prophet I hesitate to add that my prediction is based on the fair assumption of steadily needed improvements in our navigation methods. For while my second morning was done as the last flying season of the year, from which I had September, three times my plane was turned back to its starting point, were because of unsatisfactory fog (with consequent loss of hours), and again because of a breakdown, and once I was obliged to complete a journey or not due to an emergency landing.



NEW SCINTILLAS. These of the new patent developments in the field of electrical equipment. The two outside pictures show the A-2-10 (left) and A-2-10 (right) respectively for use in various cylinder engines, while in the middle is the new patent double scintilla magnet, type A-2, which gives a total output of 100 to 150 ft.

It was an attack for high aviation that prompted my leaving my Europe. I had been commissioned by Secretary Hoover in his personal representative to make an examination of civil aviation, with the hope that my observations would be of value in pointing out aviation in the United States. Our Government had not actually committed itself to the development of civil aviation, and the job had been added to this year that Mr. Hoover has so successfully performed as Secretary of Commerce. As it worked out my mission included flying over various different countries and looking in various different capital cities. With the exception of Italy, Spain, Portugal and Russia, I saw Europe from the air. I had samples of the flying skill of the pilots of nearly every European country.

In three or four days I used no special planes or pilots. I took the commercial services as they came, except that, at the recommendation of Mr. Hoover, I had special assistance from many of the better companies. These usually included the privilege of riding alongside the pilot.

European governments have done a fine job in developing civil aviation. They have invested probably twelve million dollars in it. Of this, half has been lost or absorbed in amortization and cost of operation in excess of subsidies.

A fine body of men thrust these operations. A spirit had already created itself between them. In a dozen days of hot fire after European they understood each other and work together with a spirit of co-operation that equals much of the good understandings among those who in short time ago were one of the two great camps of war.

I attended the annual meeting of the International Air Traffic Association in Berlin. Thirty-five men sat around the big table at the German Foreign Office in the Wilhelmstrasse. There were the Germans and the Austrians of the Central Powers. There were the French, the English and the Italians of the Allied Powers. There were the Dutch and other neutrals. But these divisions were wiped out. Frenchmen and Germans worked in harmony, in developing along lines of mutual helpfulness men's greatest of the late invention for the safety of the air.

But I am reporting to Mr. Hoover that there is no commercial aviation in Europe. The statement is a mere technical ally, but I believe it worth emphasizing for the extensive commercial consequences a small commercial basis, that is, however conducted, is a profit. Expenditure for shareholders in European flying concerns are still somewhere in the future.

But there is a highly developed civil aviation in Europe. It exists and develops progressively by the grace of men without either voted by the respective governments or raised through popular subscription.

European aviation is being fostered along lines almost ignored by air pilots in the United States—passenger carrying on schedules.

Considered on a basis of miles flown in the calendar year 1926 this country is far ahead of Europe in commercial aviation. But so far as public enthusiasm for an extensive program is concerned—and by that I mean the support of individuals with no technical knowledge of aviation—the old world probably leads. Aerial flying competence is a vital virtue in making a nation "rounded". Therefore, if popular opinion is needed to stimulate action on our progress in the air, we may have valuable lessons from the experience of Europe.

I am not decrying or minimizing the importance of our own accomplishments. We have more generally-owned aircraft than in all the nations of Europe combined. Nowhere in Europe are there "costly taxi" companies comparable to our own. Nor did I see any evidence of the mass, normal employment of aircraft in photography or newspaper advertising or messenger service. Mail and freight transportation by air showed in mounting rapidly. Here our outstanding air mail lines—particularly in the last year—on an amount of our determination to become a flying nation. Our present network of airways that now carry mail and express packages will serve as a skeleton for the passenger traffic waiting to be developed.

It is also well to recall that while our leadership, concentrated in the big business, in fact today, various European nations have been consistently inferior from the world aviation records which a few years ago we practically monopolized—speed, altitude and duration. It would be a sad commentary if we stood still and our air ground achievements in civil aviation surpassed in the same manner.

The planes I flew in varied from the giant craft of the Imperial Airways, Ltd., the Airway, with accommodations for twenty passengers in addition to two pilots, to an "open-class" plane which could carry for three passengers with the same relative convenience that a New York subway train affords during rush hours. Engines which ranged in size from 40 and under were commonly used for travel and toward planes, flying over the most troublesome terrain in Europe, with much

expense. Airport locations are a major problem. It requires nearly an hour to reach Gorky or Le Bourget, the air terminals of London and Paris respectively, from the center of either city. Toulouse-Rodez, Berlin's air station, from the standpoint of convenience is easily the best of the three leading old world capitals, and Paris, indeed, for years to 1926 it was the prime ground where the civil main of Imperial Germany grew—stopped in various before their own transportation-staff.

Wherever I visited in Europe, persons acquainted with my mission, and perhaps a little inspired by my enthusiasm for flying, interrupted me about my experience. The first question was generally the same. "What about safety?" Who were the safest pilots, what airlines operated the safest planes, what limits was the least dangerous to fly over? I mention this merely to emphasize a vital feature—the convenience of the "safe" conditions of the public in performing such transportation. Safety is the first consideration.

It is being provided. Wood and fabric planes are yielding to all-metal craft. Where with widespread planes safety was found in required intermediate landing fields along the airways, the new trend is to place the safety factor in the airplane itself.

Multi-engine planes that are said to be capable of flying with one of the power plants out of commission are now being used on some of the air lines. In the longer planes, too, the mechanic storing the plane's compartments is treated as second pilot, which adds to the confidence of the passengers.

It is worthy of comment that the movement toward an airport on German naval aviation by the Treaty of Versailles have given to our former enemy no undisciplined European leadership in civil aviation. In depriving Germany of all apparatus of military type and in forcing the disarmament of the German navy, the Allies unwittingly hastened civil aviation development out of the clouds. Free from the financial burden of a military aerial armament, the new republic is developing its energies in developing its wings commercially. The development has largely been limited to interior lines, but Germany has certainly the most efficient systems abroad. While American and other European countries possess a good percentage of the patterns of the British and French lines, it is Germany's planes who have come to equip the transport planes of their own country in the commercial sense. Post-war Germany is undoubtedly determined to extend its economic strength throughout the world—and aviation is an important link in its chain.

Due to the conditions which I have mentioned, air travel is little more expensive than by rail—in some instances cheaper when the time element is measured with the extra expense of meals and sleepers. Several air lines of Europe claim that without such strict government requirements they might be self-supporting. The London-Paris line, with severely handicapped by competition and rivalry, in the initial financial shortcomings of both British and French operators, although increasing the comfort and safety of the traveler.

Flying has its pleasures greatly increased by the constant conviction that great the traveler from officials and employees of the civil air lines. There have been drives to the airports the last ones of these countries. Able, capable travelers with abundant and fine flying planes, they occupy the job of today and create the job of tomorrow. They consider thought in the safety and comfort of the passenger. This is true from the narrow driver to the pilot, in whom still the air traveler with confidence places his life.

Such, surely, is the civil aviation situation abroad. It differs from many landscapes from which an American air transport system could be free—information, planning (particularly in the weather service), narrow geographical boundaries, certain barriers, rigid differences.

The doctrine of the international air companies of Europe, my personal visits abroad and their without direct subsidies. They anticipated that we of the United States on appeal to individual, and they work with interest our great experiment which will determine whether we have and progress (for now at least) progress more consistently than any other business, or did) without the government, through individuals, making up operating deficits. Already there is a saving the center of American Commercial air lines are beginning to pay. Others use the time, shortly closed, when debts will become modest. Mr. Hoover believes the answer to our problem to be that commercial aviation will be commercial in its accepted sense, that companies properly organized and directed will wisely choose lines of operation will make profits.

We in America have all the facilities to make this experiment on a great scale—equipment of personnel, planes, the engineering point to perfect new and even efficient models of transport planes, the knowledge of mass production methods to reduce capital investment. The naturally looked to solve the problem of transport of the world.

What we have great effort separated by great geographical distances. Furthermore, we have the immediate advantage that the development of our commercial aviation has been placed in the Department of Commerce of our Federal Government, service there for personal thought and encouragement of Herbert Hoover, who stands today in the estimation of the world, a very great and the public servant.



Airplane flying over the Old Airport near the Old Palace of London.



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## The Japanese Air Transportation Program

Four Civil Air Transport Lines Included in 1937 Program. Mail and Newspapers Principal Loads.

A RECENT Japanese visitor to the United States has made available to aviation a very interesting summary of the present air lines in operation in Japan. It lists, in detail, the Department for Communications, which includes the Director General for Air Navigation, has been making a tour of the United States, studying American commercial aviation. He visited for Europe on March 11. While in New York he visited the offices of Aviation, and gave a general summary of the air transport program in Japan for 1937-1937.

There are four principal lines operating in the island of Japan. The Tokyo-Osaka line is about 280 miles long and in three days makes a week. Freight XLIX and Salomon Airlines are also. At least four are always in operation. The planes are flown principally for carrying mail and newspapers. The operation of the line is the Air Navigation Department.



The Kawasaki biplane used in Japanese air transport.

near which connects at Osaka with the line to Tokyo and Sendai. The distance is a little over 300 miles and airplanes specially built for this service are used. They are of the Kawasaki type. This line is operated by the Kyokko-Kokuhaku Kasei (Japan Air Navigation Co.) which also handles the planes and.

The fourth line is regular operations in between Sakai-Osaka-Tokyo-Hankow-Kobe. This is also a regular route and operates five airplanes of different kinds three times a week. The company is the Nippon Kokuho Tsushin Kasei (Japan Air Transport Investigation Institute).

of the Asahi Newspaper Company.

The newspaper also operates a line northwards from Tokyo to Sendai, over a route of about 200 miles. Planes are flown once a week and the equipment is the same as that of the Tokyo-Osaka line.

The third line is regular operations in the Osaka-Fukuoka route which connects at Osaka with the line to Tokyo and Sendai. The distance is a little over 300 miles and airplanes specially built for this service are used. They are of the Kawasaki type. This line is operated by the Kyokko-Kokuhaku Kasei (Japan Air Navigation Co.) which also handles the planes and.

### Will Attempt Trans-Atlantic Flight

Charles M. Glover, an American pilot, who sailed from New York City for England on the liner *Prinzess Alice*, announced that his purpose in going abroad was to prepare a Berlin plane with which to attempt a trans-Atlantic flight for the *Express* (about \$25,000 price).

Mr. Glover said that he would test the plane in England and then bring it to America for the flight.

### Ireland Appointed Waco Agent

The Ireland Aircraft, Inc., of Garden City, N. Y., have been appointed agents for the Waco airplanes, manufactured by the Advanced Aircraft Company, of Troy, Ohio. The company will conduct the agency for lower New York state, Long Island and Northern New Jersey.

As well as handling the agency for Waco, the Ireland Aircraft, Inc., will continue its manufacturing operations to the building of airplanes.

### Fairchild-Cannex Design Competition

As a practical incentive to students in the United States, the Fairchild-Cannex Engine Corporation has offered three prizes for the best design of a training plane. This is the first time such awards have been offered for competition at the Fairchild-Cannex School of Aeronautics and the winners will be awarded three hundred dollars. The first prize will be \$150, the second \$100 and the third will be \$50.

In offering the results to the successful students of New York University the Fairchild-Cannex Engine Corp. has the enthusiastic support and approval of the United States War, Navy and Commerce Departments. Major General Patrick has appointed Major Louis M. Mendenhall, Chief Engineer at the War Field, to act as one of the judges, and Admiral Moffett has designated Capt. J. O. Richardson USN to act as the Navy's representative. George C. Lanning, president of the Lanning Aeronautical Engineering Corp., has been chosen for the third judge.

Thomas M. Fairchild, of the Fairchild-Cannex Engine Corp. has appointed Professor Alexander Klemin, professor of aeronautical engineering in the Thayer (Carnegie) School of Aeronautics of New York University, in cognate of the drawings and plans of the contestants. Drawings must be in Prof. Klemin's office on or before May 15, 1937.



The Johnson Twin to cross Bristol Channel.

## Johnson Twin-60 Grows in Popularity

Slightly Greater Power in Production Models of This Twin-Engine Lightplane is Announced

THE JOHNSON TWIN-60 two engine, two engine lightplane, manufactured by the Johnson Aircraft Corporation, of Dayton, Ohio, which was fully described in the Jan. 8 issue of AVIATION, has received interest in all quarters of the world. The manufacturers of the lightplane have received inquiries from scores of potential people and companies in every continent and have discontinued a large number of orders. F. Truitt Darnall, Assistant Secretary of War for Aviation, Edward J. Warner, Assistant Secretary of the Navy for Aeronautics, Brig. Gen. W. E. Gillmore, W. B. Mayo and W. E. Hoot, of the Ford Corporation, and many others of prominence in the aviation world.

The production models of the Twin-60, it is hoped, will be equipped with more powerful engines, resulting in an increase of 25 per cent in useful power, and a reduced weight over the experimental model.

E. A. Johnson, president of the Johnson Aircraft Corporation, has just returned from Europe, where he made a careful study of available engines for the Twin-60. During this visit, a constant supply of engines and spare parts for the new Twin-60 planes was ordered.

Among the men to which the Twin-60 has been put with great interest are those who photograph work. Motion pictures have been made in the U. S. of 200 to 300 ft. and in the nearest any has occurred in the field, a single photograph of a single airplane in aerial photography results. These are no small advantages to observe the ease and the means may be secured in the field, a single photograph of a single airplane in aerial photography results. These are no small advantages to observe the ease and the means may be secured in the field, a single photograph of a single airplane in aerial photography results.

The Twin-60 stands to 16,000 ft. in 41 min. and has a cruise of 11,000 ft. Its engine and tail-off characteristics are perhaps the most remarkable part of its performance. It lands at a very low speed and rolls about fifty feet after landing without the use of brakes. In a stall, the Twin-60 tends to fall off on its wheel and recover itself, rather than (as other twin-engine lightplanes) to stall.

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(Continued on page 624)

### Pittsburgh-Cleveland Air Mail in April

Postmaster General Neal has announced that contract air mail service between Pittsburgh and Cleveland will start April 21. Arthur J. Lyjak, representing T. Clifford Hall, of McKeesport, Pa., who was awarded the contract for this service six months ago, has been in conference with General Postmaster Clifford Hall, in charge of the Air Mail Service, at which final arrangements were made for the transportation of the mail service between the two cities.

It was also arranged that preliminary steps will be made at Youngstown, Ohio, and McKeesport, Pa., and these will be given the benefit of air mail just as long as the business warrants.

The schedule has not been worked out as yet, but it will be so arranged as to connect with the train-scheduled route at Cleveland, giving direct service of air mail from Pittsburgh to Chicago and the West.

The contractor will be paid three dollars a pound for this service, and the postage will be ten cents a half ounce or fraction thereof for letters transmitted over the route. The distance between the two cities is 125 miles.

### Winter Successful for Embury-Riddle

A most successful winter, from the standpoint of commercial aviation, has just closed for the Embury-Riddle Co., of London Airport, Cincinnati, Ohio. During the season they sold five Waco 9 planes, completed twelve students from their flying school and made a score of aerial pictures. The photography department has about one hundred views of the territory in and around Cincinnati, among which are cloud pictures taken above the Ohio River, at about 10,000 ft. altitude, where the sun is bright and clear.

The Embury-Riddle graduated by the school since 1936, 11 have received diplomas for one hour solo time and each probable student in the field yesterday about the plane and hangar. When planes are available for these men to fly at a rental of fifteen dollars an hour.

The company placed a new Waco plane on Franklin Brown, the well-known instructor of the United States Army, Ohio, which attracted the attention of 35,000 people a day. After the plane had been on work a week, it was moved to the Minto field, where it attracted considerable attention during the week of the flight.

London Airport starts now its second summer under the direction of Major Hoffman, of the U. S. Air Corps.



Orville Wright (left) standing by the Twin-60 with E. A. Johnson, manager of the machine.

## PICTURES THE NEWS

[illegible]

**THE ALLEGANT BROWNSHOP.** In special arrangement, Capt. Louis G. Brown, commander of the Columbia Flying Service, Columbia, Ohio, recently placed a Brown on exhibition in the local Western Home store. The plane which had flown over grain fields and had just over you but in the air carrying also passengers from Western Flight Columbia, O., attracted wide attention among the populace of that city.



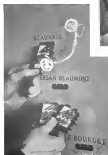
**TO SEA WITH THE FLEET** The U.S. Navy's Carrier Battle Group, with a large complement of aircraft on board, during the phase on her voyage back may be seen tomorrow leaving Annapolis and heading SEA.



**WHERE PICTURES MEAN WORDS**  
Films of and air leaves leaving the London Airport, Croydon, England, now reveals a new level of weather news just in daylight. By a combination of symbols this program short (about 45 s. plus the weather) test atmosphere conditions at points along the Eastern air route.



Box 1. (Continued)



伊藤 忠臣



**IS THIS A BEGGAR DRAPLAGE?** The machine, one of the most recent European designs, is the E 111, an electrical long-distance jet-set machine, with a distinctive tail and a Rayjet Lion engine of 420 hp. Unlike a case of those with a maximum speed of 120 mph, and has a model that carries capacity of 400 lb. The machine is the answer to the North East traffic.



**ACROPS AUSTRALIA.** Two Australian plants, *Acrops Andersonii* and *Andersonii* Smith recently made a flight across Australia from Perth to Sydney in two British bombers. The distance was approximately 4,000 miles and the flight took 40 hr. The party included Mr. J. W. Macdonald and Mr. J. Macdonald, respectively.

### The Johnson Twin-80

(Continued from page 622)

ages. Its ruffing characteristics in quick work on wing surfaces and the plane is under control at every point of the sail. The control is instantaneous and there is no waiting between moving the control column and executing the maneuver.

Clyde Research, chief test pilot for the Johnson Company, landed the plane recently in the Miami River bay, the motor being low at the time. Banks, details of all kinds, holes, and soft spots altered the ground and there was a high levee on one side, with river on the other. In spite of the adverse wind and ground conditions, the light weight, large wheels, simple control and the remarkable landing and take-off characteristics of the plane made the demonstration conspicuous.

### New Tire Developed for Lightplanes

The B. F. Goodrich Rubber Company has just announced the development of a 20 x 21 straight tread airplane tire and has already arranged to put into production on it.

This new tire has been brought out primarily to meet the requirements of lightplanes. European airplane manufacturers have reached a high point of perfection in the design of the so-called lightplane. American manufacturers have also given much attention to this type of craft during the last three years.

American manufacturers, however, have been more or less handicapped in their development of the lightplane, due largely to a lack of suitable material. Much attention has been given to accessories for the type of plane built with the result that considerable progress has been given to American lightplane construction.

The new Goodrich tire is ideally adapted to the lightplane, being extremely light in weight, but possessing sufficient strength to stand loading shocks and give dependable service. The new tire may also serve as a wheel in place of the ordinary tire and so increase speed.

### Goodrich Develops Rubber Lumber

The B. F. Goodrich Company, of Akron, Ohio, has developed an interesting rubber product which can be used in the construction of aircraft. This new material is called "Aerobond" and up to the present, has been utilized in the construction of a few speed boats, pontoons and airplane fenders. Goodrich engineers report that the product can be worked perfectly the same as wood and difficult rounded or curved shapes. It can be attached to frames with nails or screws without the danger of splitting.

"Aerobond" consists of two sheets of hard rubber, each about one-sixteenth of an inch thick, between which lies a layer of porous, but non-perforated, composition. All three parts being vulcanized into one sheet of one-quarter of an inch thickness. Due to the reinforcing characteristics of rubber when heated, this material can be molded in different shapes when heated to the temperature of boiling water and remains such shape when it is cooled without distortion of any of the original tensile strength of the board.

Rubber has a natural flexibility and the retention of much of this quality is maintained, Goodrich engineers claim, with none of the brittleness of foreign construction. The stress on it up to a fatigue, when loading is more likely to be absorbed and these distortions stress checked or eliminated when the body is of the rubber lumber, as it has been termed.

Tests conducted show that the rubber lumber withstands strains of great force. In practically all cases, the resistance to breaking force was equal to wood of the same thickness and under some conditions the rubber lumber showed itself to be from two to five times stronger than wood.

The new material is not being produced in commercial quantities at the present time, but the Goodrich Company is planning such production at an early date.

### Will Attempt to Recapture Endurance Record

East Field, Waco, of World-Flight fame, and Clarence D. Chamberlain, are now in attempt to recapture the World endurance record for the United States, it was announced on March 18 by Charles S. Terrell, Chairman of the Board of Directors of the Columbia Aircraft Corporation, which owns the plane in which the attempt will be made.

The plane is a Wright-Bellanca cabin monoplane, fitted with piston motor for 400 hp. of fuel, and powered with a Wright Whirlwind 260 hp. engine. This plane is the one in which Clarence D. Chamberlain flew to Washington in January, carrying six passengers, and making the trip of 580 miles, at five-and-a-half hours. It is now at Garden Field, where it is undergoing tests.

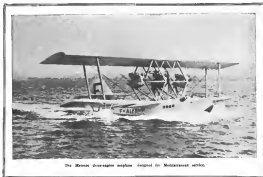
The plane will fly fifty hours' continuous flying, either over New York City or at Dayton Beach. This latter place may be selected because it would be a complete satisfactory runway for the take-off. Interest is now centered in Dayton Beach because of the amazing attempt of Major H. G. D. Sepere to make 300 m.p.h. in his 3,000 hp. Wright X automobile motor and for this reason it is thought probable to hold the endurance test there.

If the plane flies at New York City, the flight will be made between Durbin Field and Midway Field, which is the air and terminal, at New Bernards, N. J.

Endurance and landing, French pilots, established the present endurance record of 45 hrs., 11 min., 30 sec. with a Fournier biplane, with Fournier 450 hp engine in France, Aug. 7-24, 1925, covering a distance of 12734 miles.

### MR. SAMUEL AND LARRY MAURER JOINER

The Joseph A. Maurer and his wife who with Mr. J. J. Campbell, a major and flight instructor in the U.S. Army, are the only two men in the world who have made a 1000-mile round trip in a single day, and were made in a 1924-25. The record was set with three Jiffy planes.



## The Meteore Three-Engine Flying Boat

*A French Cabin Type Passenger Flying Boat  
Designed for Trans-Mediterranean Service*

**A** MOORE THE major interests which France has in the development of civil air transportation is the creation of means whereby rapid communication may be had with her colonies across the Mediterranean Sea. Accordingly, for a number of years the French Government has been fostering the development of large multi-engine flying boats capable for use in the Mediterranean service but at the same time this direction appears to have been very broad. So recently did the French Government run this first year a competition was held with a view to developing a suitable type of machine. Substantiating the fact that there was a prize offered amounting to 10,000 francs (only two machines were entered, namely, the Loire of (Maurer) (Maurer) and the Mignet Type 63, both machines being flying boats.

The Mignet is the first boat constructed by the Societe Francaise de Construction Aeronautique, a company located at Muret, France. The machine is a three-engine airplane flying boat of more or less usual construction with a small overhang on the upper wing. Furthermore the upper wing is hinged in chord as well as in section thickness in the lower wing. The upper wing tips are rectangular in plan form and narrow are fitted to the top planes only. With the design calls for heavily balanced lower tips whereas the machine actually constructed was fitted with unbalanced ailerons. The lower wings have rounded tips and a marked dihedral which is shown in the sketch of the upper planes.

The flying boat hull models of an outer layer of oak wood, a layer of rubber, backed by a layer of birch. The length of the hull is 26 ft. 4 in. with a maximum width of 7 ft. 3 in. Its design it follows the usual French practice of a gradually flat bottom with a very shallow Vee. Wide

the hull has a pronounced longitudinal curvature, there is only one step and the hull is wide forward above the waterline. The two pairs of well up in the bow of the hull with the passenger cabin in the rear under the engine and extending back beyond the trailing edge of the wings. In the rear, the vertical fin and stabilizer are fitted into the hull, the surface extending fairly high above the hull with a high aspect ratio. The horizontal stabilizer is hinged by two struts on either side. All the tail controls, rudder and elevators, are balanced.

The engines, three Hispano-Suiza's of 100 hp. each, are placed in a row on the midship section with the three tractor propellers operating in the middle of the prop, which, in turn, makes an excellent diagram of work done and engine space the wings at any point. Now do the shipman's service. The engine mounting, which will have to be installed when in operation of the non-propeller photographs, is somewhat complicated and might be expected to add considerably to the load resistance.

The general details of the machine together with the main features of performance are given herein.

Span, upper wing (including upper wing) 40 ft. 6 in.  
Span, lower wing (including lower wing) 40 ft. 6 in.  
Clear, upper wing (including upper wing) 40 ft. 6 in.  
Clear, lower wing (including lower wing) 40 ft. 6 in.  
Total length 40 ft. 6 in.  
Total width 40 ft. 6 in.  
Total height 40 ft. 6 in.  
Total weight 40 ft. 6 in.  
Total power 40 ft. 6 in.  
Total speed 40 ft. 6 in.  
Total range 40 ft. 6 in.  
Total fuel 40 ft. 6 in.  
Total oil 40 ft. 6 in.  
Total water 40 ft. 6 in.  
Total air 40 ft. 6 in.  
Total food 40 ft. 6 in.  
Total baggage 40 ft. 6 in.  
Total passengers 40 ft. 6 in.  
Total crew 40 ft. 6 in.  
Total cargo 40 ft. 6 in.  
Total mail 40 ft. 6 in.  
Total freight 40 ft. 6 in.  
Total express 40 ft. 6 in.  
Total parcel 40 ft. 6 in.  
Total letter 40 ft. 6 in.  
Total post 40 ft. 6 in.  
Total telegraph 40 ft. 6 in.  
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Total light 40 ft. 6 in.  
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The experimental landing plane used at McCook Field for testing the idea of a land-wheel amphibian.

## Loening Develops Single-Wheel Amphibian

IT WILL be of general interest to the aviation world to learn that the Patent Office has recently granted a patent to Grover Loening on the single wheel amphibian airplane. Many years ago, Loening followed the use of single wheel chassis for airplanes, and although the use of this type of chassis on a land airplane had already been known to the art from the early work of Pitagore in France, in 1912, Loening was the first to advance the use of this type of landing gear on amphibian airplane.

In presenting a paper to the Army Air Corps for the construction of a single wheel amphibian plane involving the single operation of its conventional wing slide on the side float, Loening pointed out that the operation of the plane on

the land would be practically identical to the operation of a single float airplane on the water. However, the Engineering Division of the Army Air Corps required more concrete and convincing proof, so that the engineers of McCook Field, in co-operation with Loening, mounted a single wheel landing gear on an old training plane and tested out the practicability of the idea. Upon taking the considerable time with which the plane could be handled with this new type of gear, the Engineering Division placed an experimental contract with the Loening Aeronautical Engineering Corp. for the first amphibian plane of this type, and this machine is now under construction.



**THE SINGLE-WHEEL AMPHIBIAN**  
On the left is one of the two views of the new Loening amphibian airplane mounted into the same fuselage, which will be a modification of a single wing on success after the appearance of the amphibian plane and floatplane. The two views show that the machine would have together with its complete absence of any other mechanism.



## British Maneuvers Show Value of Aircraft

The British press, commenting on most recent maneuvers in the waters adjacent to the Mediterranean, stated that the chief result of such maneuvers was the establishment of the immense value of air reconnaissance.

It was said that in ordinary weather the aircraft greatly extended the range of vision of the waters that command, as well as giving rise to an early knowledge of the enemy's approach and movements. With their great mobility and range of vision, aircraft have largely taken over the work formerly carried out by fast cruisers.

## Flight Helps Deafness

Gloria Chamberlain, piloting a Fokker plane, proved with a Wright Warfield engine, on March 29 took Miss Lucy Giff and Dr. Paul W. Winkler, an eye specialist, 15,000 ft. in an effort to restore Miss Giff's hearing. After climbing to that altitude, in case slowly down to 7,500 ft., climbed to 10,000 ft. and then made a sharp dive to a height of 5,000 ft., having been up one hour and a half.

The patient was suffering from outward pressure on the ear drums. It was reported her hearing was improved thirty per cent.

## National Elimination Balloon Race

The National Elimination Balloon Race, for the Litchfield Trophy, will be held in Akron, Ohio, May 29. This race, which is held under the patronage of the General Committee of the National Aeronautics Association, and the rules and regulations of the Federation Aeronautique Internationale, offers besides the Litchfield Trophy five prizes to the winner.

The first prize is for \$1,000, the second \$500, the third \$200, the fourth \$100 and the fifth \$50. In addition to these prizes, an award of \$100 will be given to the pilot of each balloon starting in the race.

The Litchfield Trophy is awarded each year to the chapter of the National Aeronautics Association of the United States, or other organization approved by the donor, represented by the pilot of the winning balloon. In the event that a chapter of the National Aeronautics Association, or other approved organization, wins the Litchfield Trophy three years in succession, such chapter or organization becomes the permanent owner of the Trophy.

The race will be for distance, and, aside from the winning of the Trophy, is held for the purpose of selection by the National Aeronautics Association of three contestants to represent the United States in the International Balloon Race for 1937.

The race will be open to all persons qualified under the present regulations of the N.A.A. Balloons and their full equipment must be delivered to the Akron, Ohio, Aero Association, Akron, Ohio, not later than May 28. Those arriving after that date will be subject to disqualification at the discretion of the referee. All applicants must be clearly marked with the name of the chapter of the National Aeronautics Association. Contestants are requested to send their material in a single shipment and to furnish telegraphic advice to H. H. Watson, secretary of the Balloon Race Association, Akron, Ohio, giving full details of shipment.

Entries will be received in the case of their receipt up to 3:00 o'clock, April 28, at which hour five entries will be closed. Entries received after April 28 will be accepted only with the written consent of all the members of the chapter of the Balloon Race Association and upon condition of entry fee.

Each entry shall be accompanied by an entrance fee of \$50. This entrance fee will be returned in whole or in part to contestants who have been declared as admissible or to the contestant whose entry has been eliminated by the drawing of lots or by means of other candidates. Each request for entry must be accompanied by a certified description of the material, balloons, and details of the equipment to be used, and selection will be made in the order of entries received. The minimum number of balloons carried will be two.

The designated time for the start of the race will be 5:30 p.m., May 28. The time and date of the start may be changed by the Race Committee at the request of all of the contestants. All contestants must have, in addition to their papers, their equipment. Any list of radio material sent with entrance claims, no landing ballast bags for balloon, ground cloth, and a sounding altimeter (barograph) which shall be sealed under direction of the referee for model tests.

Further details of the general regulations governing the race may be obtained from the secretary, H. H. Watson.

## An Airport For New York

A special committee of New York City's Board of Estimate has recommended that the municipality consider some definite plan for the establishment of a municipal airport. The idea is to be considered again at an early date by the Council of the City of the Board of Estimate. The special committee in response of Controller Barry, Aldermanic President McKee and Borough President Henry Driscoll, of the Bronx.

An airport which might be leased to private air transport companies was included in the recommendations. During the committee's investigation of the project, many experts were called in to give their views plus suggestions. The members of the committee were Harry D. Chambers, of the Island Air-

craft Company; John Dwight Sullivan, of William K. Atter & Co.; Fred Alvarado Klemm, of the American School, New York University; Herbert J. Dwyer, of the Metropolitan Trust Co.; W. H. S. M. Dwyer, of the Metropolitan Trust Co.; and Alexander U. Meyer, of the Northeast House Co., Long Beach.

Mr. Chambers said the committee had an airport would require between 300 and 600 acres. Mr. Sullivan recommended 1,000 and Perry Point for sites. Mr. Dwyer suggested an airport in the harbor. Mr. Dwyer thought a site near the Newburgh station would be a favorable location and Alexander Meyer recommended the Pelham section of the Bronx.

The committee said in its report: "The situation is clear that we considered and it was found that the present facility is for the municipality to get some distance into surrounding suburbs and acquire a large tract of land at reasonable prices for their airport. In the most adequate transportation facilities, would have to be included in the cost of the project. We would recommend that the acquisition of the land be requested to furnish estimates as to the cost of this within the city, together with plans for suitable transportation facilities to the North of Pelham and Airport and that when such are completed the matter should be taken up in the Committee of the Board of Estimate."

## Fliers to Visit Parents

Robert Burton Hovey, Jr., a graduate of the flying school at Kelly Field, Tex., paid a visit to his parents at White Plains, N. Y. recently in an Army pursuit plane, flying from Kelly Field, Detroit, to White Plains, N. Y. in 3 hr., 50 min., at the rate of 345 m.p.h. One stop was made at Buffalo in about 40.

## Medical Certifications Necessary

Pilots who wish to receive certificates for flight examinations in the Army or Navy, under the air commerce regulations, must also be certified under the transportation themselves and their vehicles must meet certain conditions, stating that such persons have been made. If this is not done, it will be necessary to obtain the certificate and ask for an accurate copy of the regulations.

## Mail Pilot Flies Entry for Paris Flight

Charles A. Leachman, an mail pilot, flying between St. Louis and Chicago, made formal entry on Feb. 28 for the New York City prize of \$25,000, which has been offered for the first air mail transatlantic flight before New York and Paris. In flying his entry with the National Aeronautics Association, in Washington, Mr. Leachman announced that he would fly a Ryan monoplane, powered with a Wright J-5 Whirlwind engine, at an average rate of 100 m.p.h.

The date of the flight has not yet been announced.



Carl Leachman, A. Leachman, air mail pilot, who has made entry for the transatlantic flight, and J. F. Mearns, secretary of the National Aeronautics Association.



# FOREIGN AERONAUTICAL NEWS NOTES

By Special Arrangement with the Automotive and Transportation Divisions,  
Bureau of Foreign and Domestic Commerce

## Danish Air Post Has Active Year

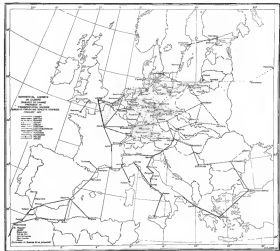
The Copenhagen Air post has just made public its statistical survey for 1926.

The total number of passengers carried to and from the post during 1926 aggregated 7,192. Arrivals at Copenhagen during the twelve months totaled 1,034 persons while 2,960 persons departed. The considerable increase in airplane passengers at the airport during the three years that planes have been operated is shown in the survey which indicates that the total has grown from 433 persons in 1923 to 5,662 in 1925 and to 7,793 in 1926.

## Russian Airlines in Turbent Reorganization

From March 3, 1927, the first line will connect Tashkent with Dushanbe, via Samarkand and Yerevan. From the terminal, Dushanbe, flights will be made to Kesheng and Samay, twice each week. Another line will connect Leningrad, formerly Cherdanov, with Chelabinsk, via Rostov and Tashkent. The line will connect these places with the railroad trunk line Krasnovodsk-Moscow. The flight from Tashkent to Dushanbe takes only six hours, while by rail and automobile it takes seven days. During the three years operation by the R.V.A.F., their airplanes carried over 1,000,000 kilometers without a single accident.

## The European Civil Airlines - 1927



Transportation Division, War Dept. U. S. G.

# Side Slips

By ARTHUR J. GORDON

In discussing editorially the great number of recently announced accidents in the New York to Paris flight, the New York Evening Post says, "While there are some persons old fashioned enough to regard the roles as the advantage of flying, most moderns are inclined to look upon the announcements of the lineups as sure proof that the Water has passed." We agree with the editor that the record is not in the true-sinkable flight attempts is a good sign of flying, and we think we can't be positive that it has really arrived until the "Oil" plan, suggested at a local Army ball, gets its second flight.

\*\*\*\*\*

The vagaries and uncertainties of human nature are often interesting to observe. A week or so ago we saw with a group of engineers and their who, in the afternoon, looked over and even passed through a certified, unregulated and hair-raising hour of aerial modernism in the demonstration flight of a new fighter, and, in the evening, shared and applauded through six hours of a six day battle royale.

\*\*\*\*\*

We hope you haven't been worried too much by the recent newspaper headlines "American To Fly New Right Wing," "Scout Board Left Wing" and "Left Wing Felture On Peace With Left To Forward Plans," as the committee appointed to investigate has reported that the articles bearing these headlines related to the air battle situation in New York, the chicken-nerve, and the political situation in France, respectively.

The mechanical assistants to Commander de Pereda on his Four-Engine Flight are to be congratulated on their speed and dexterity. If one is to believe a picture appearing recently in a New York evening paper. The test described in the picture states "Commander de Pereda..... is shown leading in the harbor of Rio de Janeiro after crossing the South Atlantic from the Cape Verde Islands. In Pereda's plane, the Zeppelin, as shown taking the water." The photograph shows that at the instant the boat was taking the water it had been ordered, a boat full of it, coming had been received from both engine and a moderate had started work on one engine. This is, of course, a very excellent record, but it can't be compared to the performance of the California firm who report landing seven and overland engines while the machine is in full flight.

The preceding paragraph reminds us that we intend asking for an investigation and attempt shortly to find who is responsible for the phrase "Full Flight," which has been the cause of confusion since its beginning. It seems to be impossible to print a picture of a plane any distance off the ground without calling attention to the fact that it is in "Full Flight." We hope to discover, in due season, whether "Full Flight" refers to "Full" and whether the new federal law against flying while drunk will reduce the number of full flights in the future.

\*\*\*\*\*

The superintendent of a company was protested to one of the commercial flying companies against the dropping of advertising circulars in wholesale quantities on the grounds in his charge. He said that he doubted that the advertising would do much good in his country, and eyes of the material were strong enough to "take the line" it would be noticeable to anyone in his business.

This large bank was open days or so, when we had built up quite a business for delivering circulars, papers, etc. Our revenue had not developed enough to be troublesome then, and we lost the entire business because when the bank found that most of the advertising was being delivered to two banks over.



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# AIRPORTS AND AIRWAYS

## The New Kansas City Airport

By William G. Moore

Airline interests in the 103-West received a great stimulus recently with the announcement by Judge E. F. McElroy, City Manager of Kansas City, Mo., that he had completed negotiations for acquiring a tract of land for a municipal airport.

The discovery and development of this field were the result of a most elaborate and comprehensive survey prepared and conducted by the Air Corps Reserve Officers Association of Kansas City. During the last two years there has been much agitation for a new field and in the Fall of 1926 the War Department announced that its late air field at Edwards Field would expire June 30, 1927, and urged the purchase of another field. The Air Corps Reserve Officers Association of Kansas City realized the importance of a systematic survey and felt that public opinion would react favorably to the recommendations of such a group, fitted by experience to possess the reliability of any particular site.

At the outset the survey was authorized by Ian Hafford, president of the Kansas City Chamber of Commerce, a former president of the Associated Advertisers Club of the World and an active booster of aviation. The survey was begun in October, 1926 and completed January, 1927.

The Air Corps Reserve Officers Association is made up of about 318 Army and Navy reserve officers. Absentive there were surveys made of seven tracts of land, each tract being

surveyed by a separate committee consisting of a chairman and four members. A committee on Field-to-Large also was appointed to report on any tracts not covered by specified committees. The Executive Council of the Association, consisting of four officers and three members, did not participate in the preliminary survey because of the fact that the first division was left to them and it was deemed best to reserve all reports with an open mind. After the council was satisfied as to the capabilities and accuracy of all reports it made a personal inspection of the fields and came to a decision after due deliberation.

The field selected has three controlled advantages of position, size and accessibility. It is a level, open bottom land of irregular shape, 587 acres in extent and about one mile by paved road from the post office and the heart of the business district of Kansas City, Mo. It is about three miles from the Kansas City, Kan. post office and North Kansas City post office. It has the Missouri River on three sides, thus protecting it against encroachments and obstructions, and on the fourth side a railroad switch yard offers protection to within 500 yards of the landing zone.

The position of the new field is the head of the Missouri River, directly north of the city, makes for ease of identification from the air and it is so located that it is estimated that 500,000 people a day will view the field in the normal course of traveling to and from business and social affairs.

When public announcement was made through the press,

the nature project was received with enthusiasm by all local aviation interests and civic bodies. The War Department, the National Air Transport and connected companies are now making plans to move to the field immediately.

## Massachusetts, III.

By Ralph H. Foley

A Waco plane, piloted by the Midwest Airways Corporation, was the center of interest at the annual Massachusetts Automobile Show held at the Armory, the week of March 7.

During a period of ten days, the Midwest Airways Company sold and delivered three planes. This makes a total of four Waco's sold since the first of the year.

Kent Hurrett, a young aviator at the local field in the person of the new Model 38 V, was brought back from the factory a few days ago by John Langston.

The new model landing field has been ruled with a ten foot track-width center, to give free flow any slight irregularities and so truly for flying gear. It runs have been placed around the highway and across the field.

## Cedar Rapids Airport

By D. I. Faxon

What was an airport situated in an area previously adapted to a natural flying field, Cedar Rapids, Iowa, rapidly is gaining recognition from substantial pilots in the Middle West. This airport has been purchased and is the best in that section of the country. It was created by the Chamber of Commerce of Cedar Rapids.

The field is 2,500 to 1,500 ft. and is made take-offs and landings in any direction. Naturally, first, the entire plot required only a 10 ft. levee bank to prepare it for planes of all types. The field is completely drained. Equipment for the six plane, larger was provided by the Chamber of Commerce, and the Cedar Rapids Division of Eastern Air Lines is the first to use any such of the new field.

The field is two and one-half miles from the center of the business district and is in an open end and was marked with three almost solidly between Chicago and Des Moines, the Cedar Rapids Airport serves as a link to the south, to commercial aviation is developed.



The Air Corps Reserve Officers Association of the Air Corps Reserve Officers Association of Kansas City, Mo., is made up of about 318 Army and Navy reserve officers. Absentive there were surveys made of seven tracts of land, each tract being

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## PUBLISHER'S NEWS LETTER

From the many letters that AVIATION has received from some of the Aerial Service operators who were sent the bulletin of The Commercial Press on this branch of aeronautics, it is clear that the time has now come to this most important field in these columns two years has been becoming a part of every aeronaut's conscious time. For many years, particularly after the war, there had been a very great confusion concerning the employment of aircraft for air transport and other uses. Usually, both were grouped under the general term, commercial aviation. This view an accurate impression concerning American aviation. Those who did not doubtless compared European air transport progress with what they called our commercial aviation. The conclusion that the public drew was not very incorrect, as to the commercial nature of aviation abroad, but it accepted as a fact the reports of unadorned advanced territories that we lagged sadly behind Europe in the commercial development of the use of aircraft, which is of course false. In order to clear up these misleading uses of terms, AVIATION has given to the various uses of aircraft definite names and it is gratifying to note that they are being adopted (usually and helping to clear up a condition that has been misunderstood).

\*\*\*\*\*

Perhaps another definition of the term will be helpful as there are so many new readers of AVIATION who may be unconcerned with the earlier statements. In the first place, we have used the word *and* to imply aviation activities that are subdivided directly by the government abroad. This includes every use that is commercial. Europe had gradually extending to all parts of the world. It also includes certain other activities like the light airplane clubs in England that are directly concerned by the government. We use commercial aviation to include all those activities which rely on private capital for their enterprise and have as an ultimate purpose the earning of profits for their stock holders, and which are not exempt from the government in the form of direct subsidy. The general class should be divided into two classes that have become so dissimilar that they are now divided into groups that do not overlap in any way: the air transport companies and the small airline operators. The former have had practically all the publicity and is the much of the public segment all the aircraft operators that have considerable economic power.

As it will be known to the readers of AVIATION, it is the latter group that this paper has been concentrating with all the means at its disposal. The publications that have been made by the pilots that have become fixed base operators created so much interest and surprise that little more has had to be done than to establish them as an important factor in world aeronautics. Everyone—the Aeronautical Chamber of Commerce, the National Advisory Committee for Aeronautics and finally President Eisenhower now give to the aerial service operators the credit of making America first in the air and keeping it there. The old impression that we were far behind Europe in flying has been changed to the accepted belief that we lead the world in miles flown and will soon, we hope, take the lead in the air routes opened.

\*\*\*\*\*

By the time this is read, the bids for the Chicago-New York section of the Air Mail route will have been received by the Post Office Department and the greatest interest will be centered over the award to the successful bidder. It is too early to discuss the ramifications of the bidding for the transcontinental route, but it is likely to result that this bidding has brought out certain entirely new viewpoints that are bound to have a very important effect on the air mail law in the future. If the hopes of the Post Office Department are realized and the growth of air mail reaches the percentages expected, some of the lines will become very profitable within a very short time. The award of the growth of the volume of mail carried on one or two of the air mail lines where a real service is rendered in the terminal cities is so astonishing as to make a reality of the hope that the day of air transport on a profit-making basis has been arrived. On the other hand, if some of the gloomy predictions of some of the air line operators are true, we may be entering into a period of hopeless competitive bidding that has done so much to make the Army and Navy contractual relations with the aircraft industry a most precarious business. Notwithstanding the information that may become immediately available to the public, the fact that will not be made until this Fall when the whole of the air mail is carried by contract rather than by the government itself. Then, and then only, will the real result of the Kelly bill be known. During this period of preparation, it, perhaps, will be better to hold opinions in faith.

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**FOR SALE:** Best bargain, serial engine, Rotax 10 converted airplane, 16 inch box, \$130. 4 plate magazine for mapping 10 motors, \$20. Box 581 Aviation.

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